

ACC NR: AT7000586

pointed out that laboratory experiments and simulation of magnetic effects will be very valuable in the investigation of the Tungus explosion.

SUB CODE: C4, 03 / SUBM DATE: 23Feb63/ ORIG REF: 006/ OTH REF: 011

Card 2/2

ACC NR: AT7004159 /N) SOURCE CODE: UR/0000/66/000/000/0027/0034

AUTHOR: Kurtepov, M. M. ; Fokin, M. N. (Candidate of chemical sciences);  
Zhuravlev, V. K. ; Oreshkin, V. I.

ORG: none

TITLE: Comparative evaluation of the tendency of Kh18N10T and Kh17N13M3T  
steels to pitting and crevice corrosion in sodium chloride solutions

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruk-  
tsionnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo  
Nauka, 1966, 27-34

TOPIC TAGS: corrosion, steel, sea water corrosion, pitting, crevice corrosion,  
sodium chloride/Kh18N10T steel, Kh17N13M3T steel

ABSTRACT: A study of the relative propensities of Kh18N10T and Kh17N13M3T  
steels to pitting and crevice corrosion in an aggressive medium, such as sea  
water, showed that in the presence of narrow gaps Kh17N13M3T has a higher  
resistance to crevice corrosion than Kh18N10T, which develops crevice corrosion  
at a rate of 30—40 mm a year. Independent electrochemical analysis showed that

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UDC: 620.197.1:546.3.19

ACC NR: AT7004159

this corresponds to a pH value of approximately 1.5 within the gap. At 80 C, the oxidizing effect of an aerated sodium chloride solution is sufficient to generate and develop pitting in hot Kh18N10T or Kh17N13M3T steel pipes as a result of the action of microcouples or thermogalvanic macrocouples. Orig. art. has: 5 figures.

[SP]

SUB CODE: 11, 13/SUBM DATE: 27Sep66/ORIG REF: 003/

Card 2/2

L 11968-65 ENT(1)/EPA(t)-2/ENT(m)/EPF(c)/EPF(r)-2/EDC(t)/EDC(b)-2 Pt-4/  
Pt-10/Pu-4/P1-4 IJP(c)/ESD/AS(mp)-2/ASD(u)-4/ESD(gs)/Pb-4 25

ACCESSION NR: AP4047351

G/0139/64/000/0005/0086/0090

AUTHOR: Zhuravlev, V. K.

TITLE: Losses in a dielectric situated in the field of ionizing radiation B

SOURCE: IVUZ. Fizika, no. 5, 1964, 86-90

TOPIC TAGS: ionizing radiation, relaxation polarization, dielectric loss, dielectric relaxation

ABSTRACT: The author considers relaxation polarization induced by low-intensity ionizing radiation, when irreversible changes in the dielectric are neglected. Although the reversible changes in

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L 11968-65

ACCESSION NR: AF4047351

tion-induced excited molecules is examined and it is shown that the increase in losses due to the increase in the number of molecules capable of acquiring enough energy to interact with other charges is offset by a decrease due to the rise in energy level of the relaxing molecules themselves. Consequently, the appearance of "hot" molecules can lead to both acceleration and slowing down of the dielectric relaxation, and also to an increase and a decrease of the dielectric losses. This explains from a unified point of view the experimentally observed effects: the shift in the relaxation maximum, and the common character of the temperature and frequency dependences of the dielectric loss angle in a radiation field. The existence of two competing relaxation processes induced by low-intensity radiation is suggested as a mechanism for dielectric relaxation. The results of the experiment on the acceleration of monomolecular relaxation, which is observed at a rate of 100 cps, and the results of the GPR experiment in the laboratory for a discussion of the

L 11968-65

ACCESSION NR: AP4047351

ASSOCIATION: NII pri Tomskom politekhnicheskoi inzhinernoi  
S. M. Kirova (Scientific Research Institute at the Tomsk Polytechnic  
Institute)

SUBMITTED: 24Jul63

INCL: 00

SUB CODE: EM, NP

NR REF SOV: 006

OTHER: 001

Card 3/3

L 34955-65 EMT(a)/PSS-2/EMT(1)/ZPA(a)-2/SEC-1/EBB(a) Pa-1/Ep-1/Psc-1/Pt-10/  
 Pl-1 TJP(c) 00  
 ACCESSION NR: AF5006048 8/0139/05/c 10/001/0032/0035

AUTHOR: Zhuravlev, V. K.

TITLE: On the absorption of radio waves by a dielectric in the field of ionizing radiation

SOURCE: IVUZ. Fizika, no. 1, 1965, 32-35

TOPIC TAGS: dielectric, wave absorption, ionization, microwave, microwave absorption, dielectric loss, polarizability

ABSTRACT: Continuing earlier work on the dielectric losses in a dielectric located in the field of ionizing radiation (Izv. Vuzov SSSR, Fizika No. 5, 06, 1964), the author analyzes from a quantum-statistical point of view the reversible changes

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L 34955-65

ACCESSION NR: AP5006048

the rotators, as well as the loss component of the dielectric constant, can become negative in the energy interval in which the derivative of the distribution function with respect to energy is positive. This condition, which is equivalent to the quantum mechanical condition for the formation of local population, must be analyzed



ASSOCIATION: NII pri Tomskom politekhnicheskoi instituta imeni M. Kirpicheva  
(NII at the Tomsk Polytechnic Institute)

SUBMITTED: 24Jul23

ENCL: 00

ST CITE: EM, EC

NO REF SQV: 004

OTHER: 001

A TO PDSST: 3214

Card 2/2

ACC NR: AP6034397

are gained by impurity levels such as  $\text{ClO}_3^-$  ions formed in the course of the decomposition (Table 1). Theoretical analysis of the processes taking place and experimental

Table 1. Impurity content in the solid  $\text{NH}_4\text{ClO}_4$  residue

Degree of decomposition of $\text{NH}_4\text{ClO}_4$ , %	Impurity content, mol%	
	$\text{Cl}^-$	$\text{ClO}_3^-$ , $\text{ClO}^-$ , $\text{ClO}_2^-$
16.1	0.301	0.275
23.0	0.101	0.068
30.0	0.025	0.024

results indicated that the reaction rate of the thermal decomposition of  $\text{NH}_4\text{ClO}_4$  increases with a decrease of the concentration of free electrons in  $\text{NH}_4\text{ClO}_4$ . In the case of irradiated  $\text{NH}_4\text{ClO}_4$ , the formation of  $\text{ClO}_3^-$  ions is probably not the only factors that accelerates thermal decomposition. Three possible additional factors are considered: 1) the arrangement of  $\text{ClO}_3^-$  ions formed at irradiation is not that it increases their catalytic activity; 2) formation of additional radiolysis products such as, among others,  $\text{Cl}^-$  ions; however, no acceleration was observed on addition to  $\text{NH}_4\text{ClO}_4$  of the same amounts of  $\text{Cl}^-$  ions as are formed on irradiation; 3) formation of radiation-induced defects. Among these factors, the formation of defects appears to be most probable. Determination of the type of these defects requires further studies. A

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Fig. 1. Effect of irradiation or addition of  $\text{ClO}_3^-$  ions on the thermal decomposition of  $\text{NH}_4\text{ClO}_4$ .

$\alpha$  - Portion of reacted substance;  $\alpha = 1$  is the decomposition of 30% of the salt specimen (maximum decomposition at low temperatures):

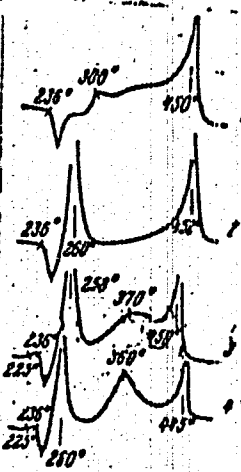


Fig. 2. Thermograms of pure, irradiated and contaminated  $\text{NH}_4\text{ClO}_4$ .

similarity was established in the nature of changes of conduction, dielectric losses and decomposition rate on contamination and irradiation of  $\text{NH}_4\text{ClO}_4$ . This fact indicates that, in both cases, these changes are due to the same defect. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 20 / SUBM DATE: 18May65/ ORIG REF: 010/ OTH REF: 017/

Card 3/3

L 16736-66 EHT(1)/ECC/EWA(h) CW

ACC NR. AR501647

UR/0149/55/CKO/005/A019/A019  
551.593.553

23  
E

SOURCE: Ref. zh. Geofizika, Abs. 6A101

AUTHOR: Vasil'yev, N.V.; Zhuravlev, V.K.; Zazdravnykh, N.P.; Prikhod'ko, T.V.;  
Demin, D.V.; Demina, L.N.

TITLE: Connection between noctilucent clouds and some parameters of the ionosphere

CITED SOURCE: Dokl. 3-y Sibirsk. konferentsii po matem. i mekhan., 1964, Tomsk.  
Tomskiy un-t, 1964, 302-303

TOPIC TAGS: ionosphere, ~~cloud formation~~, cloud level, atmospheric cloud

TRANSLATION: In Tomsk, during the summer of 1963, noctilucent clouds were observed eleven times. A comparison with the state of the ionosphere showed that, as a rule, these clouds were accompanied by a lowering of the average altitude of the sporadic stratus E.

SUB CODE: 04/

ENCL-00  
SUBM DATE: NONE

Card 1/1 vmb

ZAKHAROV, Yu.A.; SAVEL'YEV, G.G.; ~~ZHURAVLEV, V.K.~~; BOGDYREV, V.V.

Changes in the physicochemical properties of solids in the presence of admixtures. Part 4: Thermal decomposition of silver oxalate. Kin. i kat. 6 no.3:415-423 My-Ja '65.  
(MIRA 18:20)

1. Tomskiy politekhnicheskii institut imeni Kirova.

ZHURAVLEV, V.K.

Absorption of radio waves by a dielectric in an ionizing radiation field. Izv. vys. ucheb. zav.; fiz. 8 no.1:32-35 '65.

(MIRA 18:3)

1. Nauchno-issledovatel'skiy institut pri Tomskom politekhnicheskoye institute imeni Kirova.

ZAK, P.S.; ZHURAVLEV, V.L.; ROMANOV, V.A., otv.red.; SADOMOV, N.T.,  
red.; GOTOVTSEV, A.A., red.; GRINBERG, A.Ya., red.; ZUREKOV, V.T.,  
red.; KOGAN, A.M., red.; KRUGLIKOV, A.V., red.; HEBGUN, K.K.,  
red.; NAZIMOV, N.M., red.; NIKMARK, A.M., red.; MOTYAKHOV, M.A.,  
red.; SPEVAK, V.Ya., red.; TENENBAUM, M.M., red.; SHNEFYMER, H.I.,  
red.; ALADOVA, Ye.I., tekhn.red.; SEKIYAR, S.Ya., tekhn.red.

[Design and manufacture of globoid gears] Proektirovanie i  
izgotovlenie globoidnykh peredach. Moskva, Ugletekhizdat, 1958.  
87 p. (Tekhnologiya ugol'nogo mashinostroeniya, no.2).

(MIRA 13:2)

(Gearing)

KOROSTELEV, S.F.; MAKHOV, A.A.; ZHURAVLEV, V.L.

Letter to the editor. Lit. proizv. no.10:47 0 '63. (MIRA 16:12)



KATIN, Vladimir Konstantinovich; ZHURAVLEV, V.L., retsenzent;  
UTKIN, G.N., retsenzent; KONSHINA, V.A., red.; BORISKINA,  
V.I., red. kart; KOVALENKO, V.L., tekhn. red.

[Morocco] Morokko. Moskva, Uchpedgiz, 1963. 68 p.  
(MIRA 17:3)

ZHURAVLEV, V. L., S. V. ELISEEV and P. S. ZAK

Konstruirovaniye i izgotovleniye odnozakhodnykh globoidnykh peredach. (Vestn. Mash., 1951: no. 4, p. 25-30; no. 5, p. 28-32)

Includes bibliography.

Designing and manufacturing single-cut cone drives.

DIC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

ZHURAVLEV, V.L.; ALEKSEYEV, M.V., dotsent, rukovoditel' raboty

Fire hazards of aniline hydrogenation shops in the production of  
caprolactame from aniline. Pozh. bezop. no.4:38-46 '65.

(MIRA 19:1)

L 11108-66	(N)	EW(m)/EW(e)/EW(v)/T/EWP(t)/EWP(k)/EW(z)/EW(b)/EW(c)	UD/H/H
ACC NR: AP6002531	SOURCE CODE: UB/0236/65/000/023/0036/0036		
INVENTOR: Petrov, S. A.; Kaufman, M. S.; Kialyuk, F. I.; Zhuravlev, V. L.; Krichevskiy, Z. A.; Aldyrev, D. A.; Kazintsev, N. V.; Tkachev, V. N.			
ORG: none			
TITLE: Method of strengthening thin-sheet parts. Class 21, No. 176646. (announced by the All-Union Scientific Research and Design Technological Institute of Coal Machine Building (Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-tekhnologicheskii institut ugol'nogo mashinostroyeniya); Rostov Scientific Research Technological Machine Building Institute (Rostovskiy nauchno-issledovatel'skiy institut tekhnologii mashinostroyeniya))			
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 36			
TOPIC TAGS: thin sheet part, part strengthening, part surfacing, thin sheet surfacing, wear resistant powder			
ABSTRACT: This Author Certificate introduces a method of strengthening thin-sheet parts by surfacing with wear-resistant powder deposited with high-frequency current. To maintain a constant gap between the inductor and the surfaced part, ensure a small depth of penetration in the base metal, and to avoid burning through, the inductor is located below the surfaced part.			
[ND]			
SUB CODE: 11/ Card 1/1 H(W)		SUBM DATE: 24Nov62/ ATD PRESS: 4/76	
UDC: 621.791.927-41			

ZHURAVLEV, V.L.

[Technology of globoid gear production] Tekhnologiya  
izgotovleniia globoidnykh peredach. Moskva, Mashino-  
stroenie, 1965. 149 p. (MIRA 18:12)

L 39161-66 EEC(k)-2/EWT(d)/EWP(1) IJP(c) GG/BB  
 ACC NR: AP6030380  
 SOURCE CODE: UR/0167/66/000/002/0080/0083

AUTHOR: Abdullayev, D. A.; Zakharov, Ya. V.; Zhuravlev, V. M.  
 ORG: Uzbek Scientific Research Institute for Power and Automation (Uzbekskiy nauchno-issledovatel'skiy institut energetiki i avtomatiki)

TITLE: Synthesis of the selector of one class of information processing device  
 SOURCE: AN UzSSR. Izvestiya. Seriya tekhnicheskikh nauk, no. 2, 1966, 80-83  
 TOPIC TAGS: information processing, pulse counter

ABSTRACT: An interesting class of information processing devices is that in which the inputs receive signals with various characteristics and levels, and the output of each characteristic and its level is fixed individually. This requires selective distribution of the signals with identical levels into individual output channels. The authors have developed a device, applied to an automatic sowing device, which performs this function in a reliable manner with a somewhat simpler circuit than those known earlier. Below is a schematic diagram:

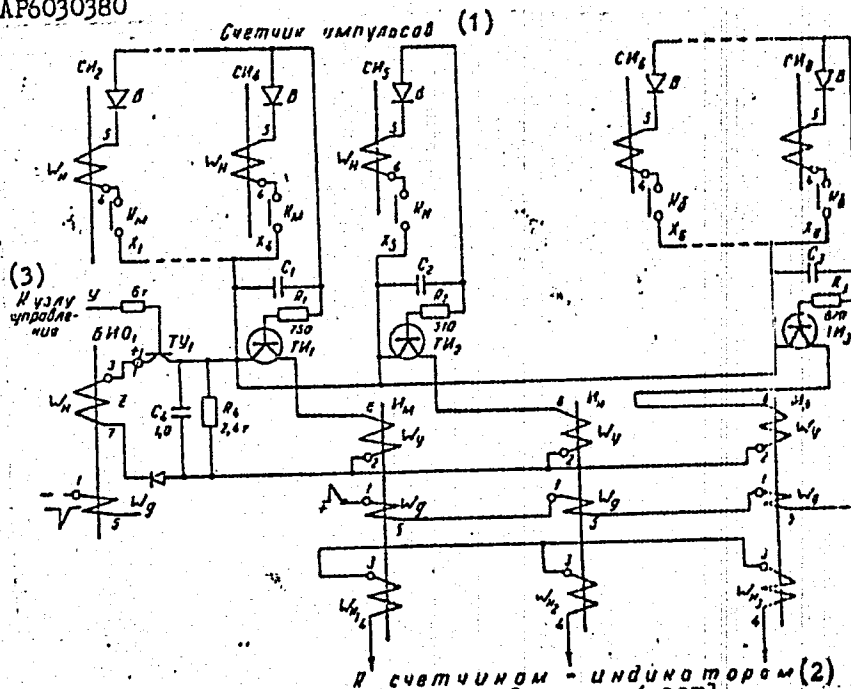
Key: 1 - pulse counter; 2 - to indicator-counters; 3 - to control unit; other symbols universal.

Card 1/2

и формулы. [JPRS: 36,127] 001

L 39161-66

ACC NR: AP6030380



Orig. art. has: 2 figures and 7 formulas. [JPRS: 36,127]  
 SUB CODE: 09 / SUBM DATE: 20Apr65 / ORIG REF: 001  
 Card 2/2

L 24716-66 EWT(d)/EWT(1)/EWP(1)/EWA(h) IJP(c) BE/GA

ACC NR: AP6009908

SOURCE CODE: UR/0413/66/000/004/0105/0106

INVENTOR: Abdullayev, D. A.; Zakharov, Ya. V.; Zhuravlev, V. M.

ORG: none

TITLE: A device for asynchronous triggering of shift registers. Class 42, No. 179093

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 105-106

TOPIC TAGS: shift register, trigger circuit, computer component

ABSTRACT: This Author's Certificate introduces a device for asynchronous triggering of shift registers. The unit is based on a two-cycle ferrite-diode shift register which contains three ferrite cores with control windings, as well as input and output windings connected by coupling circuits. The device also contains a blocking circuit connected between the input of the second core and the output of the third core. An isolated synchronous pulse is generated over a wide range of trigger pulse durations by connecting the recording winding of the second core in series with the trigger circuit.

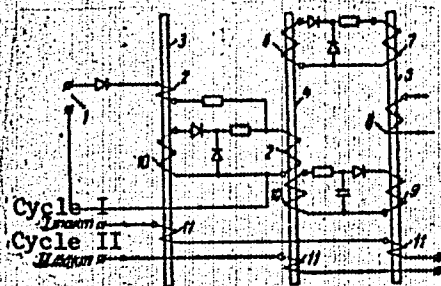
Card 1/2

UDC: 681.142.07



L 24716-66

ACC NR: AP6009908



1 - input; 2 - input winding; 3-5 - cores; 6 - blocking winding; 7 - feedback winding; 8 - output winding of core 5; 9 - input winding of core 5; 10 - output windings of cores 3 and 4; 11 - control winding for the corresponding core.

SUB CODE: 09/ SUBM DATE: 28Jul63/ ORIG REF: 000/ OTH REF: 000

Card 2/2

ACCESSION NR: AT4039569

S/0000/63/000/000/0010/0023

AUTHOR: Zhuravlev, V. M.

TITLE: Some principles of the construction of ternary elements

SOURCE: AN UzSSR. Otdeleniya tekhnicheskikh nauk. Rezul'taty\* nekotorykh issledovaniy v oblasti energetiki, avtomatiki, mekhaniki i gornogo dela (Results of some investigations in the fields of power engineering, automatic control, mechanics, and mining engineering). Tashkent, Izd-vo AN UzSSR, 1963, 10-23

TOPIC TAGS: control system, automatic control, automation, transistor, parametron, ternary element, semiconductor, switching theory, electromagnetic relay, tripolar relay, ferrite core adder

ABSTRACT: The article deals primarily with problems relating to the articulation and construction of non-binary (principally, ternary) components in connection with the ever-increasing interest in the non-binary switching theory for the analysis of complex systems. An effort is made to use a single technique in the study of non-binary elements in order to

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ACCESSION NR: AT4039569

arrive at concrete technical solutions. Noting the high state of development presently attained in the analysis of binary structures, the author postulates that the study of elements with higher structures should be based on the achievements of this theory, with the most correct method being that of investigating elements with structures close to binary. The first step in the study of ternary structures is the analysis of existing structures with three steady states. Preliminary investigation has shown that existing ternary elements may be classified as follows: a) according to the principle of operation at the basis of the work of the elements; b) according to purpose, i.e., their function in automatic equipment; c) according to possible similarity with binary elements. On the basis of these principles, the author has classified the ternary elements, descriptions of which are available in the pertinent technical literature. Noting that a great many three-state circuits have been developed, the author lists and discusses only a part of them in this article for the purpose of illustrating the system of classification adopted. The following types of tri-state systems are considered in some detail: circuits using electromagnetic elements (in particular, the electromagnetic relay of Bullen and Wilson of the United States); circuits using electronic elements (in particular, a trigger device having three stable states, in which diode coupling between the cathodes of the tubes is employed as the

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ACCESSION NR: AT4039569

nonlinear element; ternary elements using gas-filled tubes; three-position relays, etc.); circuits using semiconductor elements (in particular, a tri-stable trigger using a point-contact transistor with two collectors and one emitter); circuits using magnetic elements (in particular, ternary switches and adders using ferrite cores with rectangular hysteresis loop, as used, for example, in the "Setun" computer of Moscow State University, which operates with a ternary code); nonlinear electrical circuits with several steady states (in particular, the parametron). The survey of existing circuits with three steady states permits an evaluation of the place of each group of elements among known non-binary systems, thus making possible a correct approach to the problem of selecting those elements on the basis of which ternary elements might best be constructed. The advantages and defects of each of the various classification categories discussed in the preceding sections of the article are analyzed from this point of view. The author concludes that new ternary elements should be designed primarily on the basis of magnetic and semiconductor materials. Multi-aperture magnetic cores constitute elements of great promise for the development of multi-stable circuits. Orig. art. has: 7 figures.

ASSOCIATION: Otdeleniye tekhnicheskikh nauk AN UzSSR. (Department of Technical Sciences, AN UzSSR)

Card 3/4

KATS, M.Sh.; ZHURAVLEV, V.M.; AGANICHEV, P.V.

Effect of the quality of Aktyubinsk chromium ores and reducing agents on the desulfuration of carbon ferrochromium. Izv.vys. ucheb.zav.; chern. met. 8 no.4:75-82 '65.

(MIRA 18:4)

1. Aktyubinskiy zavod ferrosplavov.

ZHURAVLEV, V.M.; LIDUMS, A.K.

Boltless fastener for the lining of a ball mill. Tsement 30  
no.1:19-20 Ja-F '64. (MIRA 17:8)

1. Rizhskiy tsementnyy zavod.

KARSANOV, G.V.; ODOYEVSKIY, L.S.; KHODKIN, V.I.; ZHURAVLEV, V.M.;  
MEL'NICHENKO, A.A.

Preparation of chromium metal by thermochemical reduction  
with silicon in electric furnaces. Stal' 22 no.2:135-137  
F '62. (MIRA 15:2)

(Chromium—Electrometallurgy)

KRIVOSHEYEV, V.M.; ZHURAVLEV, V.M.

Filter-heater apparatus and ways of feeding dust into kilns.  
TSement 28 no.2:18-19 Mr-Ap '62. (MIRA 15:8)

1. Rizhskiy tsementnyy zavod.  
(Kilns, Rotary) (Electric filters)



ZHURAVLEV, V.M., aspirant; GOLOVATYY, G.M., veterinarnyy vrach

Infectious gastroenteritis in swine. Veterinariia 41 no.1:43-49  
Ja '64. (MIRA 17:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy  
veterinarii (for Zhuravlev). 2. Sovkhoz imeni Kotovskogo Khmel'-  
nitskoy oblasti (for Golovatyy).

ZHURAVLEV, V.M., aspirant

Changes in swine with infectious gastroenteritis complicated by balantidiasis and paratyphoid. Veterinariia 40 no.2:35-38 F '63.  
(MIRA 17:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii.

ZHURAVLEV, V.M.

Using a projection lantern. Geog. v shkole 19 no.2:63-65  
Mr-Apr '56. (MIEA 9:7)  
(Lantern projection) (Geography--Study and teaching)

ZHURAVLEV, V.M.

Evaluation of an infrasonic method for measuring nonlinear distortions introduced by loudspeakers. Trudy LIKI no. 7:37-44 '61.  
(MIRA 18:3)

1. Kafedra akustiki Leningradskogo instituta kinoinzhenerov.

ZHURAVLEV, V.M.

Structural reliability of digital computers. Dokl. AN Uz. SSR  
21 no.8:18-20 '64. (MIRA 19:1)

1. Uzbekskiy nauchno-issledovatel'skiy institut energetiki i  
avtomatiki i Glavnoye upravleniye po proyektirovaniyu elektro-  
stantsiy, podstantsiy i setey Ministerstva stroitel'stva  
elektrostantsiy SSSR. Submitted Nov. 19, 1963.

S/187/63/000/002/004/004  
A004/A126

AUTHOR: Zhuravlev, V. M.

TITLE: Method of measuring nonlinear distortions with the aid of noise bands

PERIODICAL: Tekhnika kino i televideniya, no. 2, 1963, 42 - 47

TEXT: The author has carried out a comparative analysis of all methods known at present for measuring nonlinear distortions in conformity with sharply irregular frequency characteristics and frequency-discriminating nonlinearity. He presents the results of his work performed in the course of the last years, and suggests using the noise band method which, in comparison with other methods that are used at present, shows a number of advantages. The principle and skeleton diagrams of measuring nonlinear distortions by noise bands are presented. An account is given of the considerations in selecting the band width of the test signal and also of the demands made on the filters. Test results obtained with the measuring installation are given. There are 8 figures.

Card 1/1

L 6433-66 EWT(1)/EWA(h)

ACC NR: AR5014356

SOURCE CODE: UR/0271/65/000/005/B005/B005

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.  
Svodnyy tom, Abs. 5B32

AUTHOR: Zhuravlev, V. M.

TITLE: Structural reliability of digital equipment

CITED SOURCE: Dokl. AN UzSSR, no. 8, 1964, 18-20

TOPIC TAGS: digital equipment, structural reliability, equipment reliability

TRANSLATION: The reliability of components having several stable states is compared with the reliability of binary components, the reliability of the entire system being specified. The following assumption is adopted: the digital system is represented by a number of equi-reliable components which function in succession. It is proven that the ternary number system, under the above conditions, is not only the most economical but also optimal in its reliability. It is noted that, with ternary components less reliable than binary components, a system can be realized whose reliability will be as good as that of a binary-component system.  
Bib. 2.

SUB CODE: DP

LW

Card 1/1

UDC: 681.142.019.3.001

0901 1776

MOROZOV, A.N.; CHIRKOV, N.A.; FIRSOV, S.G.; KRASHCHENKO, L.S.; Prinsipali  
uchastnye: RISPEL', K.N.; VAYNSHTEYN, O.Ya.; BUSHEV, A.P.;  
SNEZHKO, B.Ya.; MEL'NICHENKO, A.A.; ZHURAVLEV, V.M.

Alloying open-hearth steel with exothermic ferroalloys in the  
ladle. Stal' 25 no.5:412-414 My '65. (MIRA 18:6)



ZHURAVLEV, V.M.

Suitability of the correlation method for the measurement of  
nonlinear distortions. Trudy LIKI no.10:99-102 '64.  
(MIRA 18:9)

1. Kafedra akustiki Leningtadskogo instituta kinoizhenerov.

GUSEV, G.V.; ZHURAVLEV, V.N.

Biological characteristics of the Colorado beetle. Zashch. rast.  
ot vred. 1 bol. 3 no.3:46-47 My-Je '58. (MIRA 11:6)  
(Potato beetle)

ZHURAVLEV, Vitaliy Nikanorovich; DUGINA, N.A., tekhn. red.

[Reducing the weight of structures used in machine manufacture]  
Snizhenie vesa mashinostroitel'nykh konstruktsii. Izd.2.,  
perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.  
lit-ry, 1961. 238 p. (MIRA 15:2)  
(Machinery—Design) (Materials)

KORETSKIY, B.A., inzh. KOMAROV, G.I.; ZHURAVLEV, V.N.;

Using preliminary and consecutive cementing in the Kuznetsk  
Basin. Shakht. stroi. 8 no.5:22-25 My'64 (MIRA 17:7)

1. Yegozovskoye shakhtostroyupravleniye ( for Koretskiy). 2.  
KuzNIIshakhtostroy (for Zhuravlev).

ZHURAVIEV, V.N., mladshiy nauchnyy sotrudnik

Some characteristics of the biology of the Colorado beetle  
in Kalinin Province. Zashch. rast. ot vred. i bol. 5 no.9:  
50-51 S '60. (MIRA 15:6)

1. Kaliningradskiy oporny punkt Vsesoyuznogo instituta  
zashchity rasteniy.  
(Kalinin Province—Potato beetle)

DUDA, Ye.G., gornyy inzh.; ZHURAVLEV, V.N., gornyy inzh.; UMNOV, N.R.,  
gornyy inzh.

Utilization and capacity of the excavator fleet in Kuznetsk  
Basin openent mines. Ugol' 34 no.7:21 J1 '59.  
(MIRA 12:10)

1. KuzNIIShakhtostroy.  
(Kuznetsk Basin--Strip mining) (Excavating machinery)

VOYNICH, L.K., inzh.; GORELIK, Z.M., inzh.; ZHURAVLEV, V.N., inzh.;  
CHIRKOV, A.G., inzh.; BOL'SHAKOV, B.N., red. izd-via; UVAROVA,  
A.F., tekhn. red.

[Catalog of parts for the MAZ-501 logging tractor and the  
MAZ-502 and MAZ-502A motortrucks] Katalog detalei lesovoznogo  
tiagacha MAZ-501 i gruzovykh avtomobilei MAZ-502 i MAZ-502A.  
Moskva, Mashgiz, 1961. 447 p. (MIRA 15:3)

1. Minskiy avtomobil'nyy zavod. 2. Otdel glavnogo konstruktora  
Minskogo avtomobil'nogo zavoda (for Voynich, Gorelik, Zhuravlev,  
Chirkov).

(Motortrucks) (Tractors)

L 20775-66 EWT(d)/EWT(m)/EWA(d)/EWP(r)/T/EWP(t)/EWP(k)/EWP(h)/EWT(l)/ETC(n)-6 JD/HW

ACC NR: AP6004682

SOURCE CODE: UM/0112/65/000/010/0041/0042

AUTHOR: Ryshikov, A. A.; Zhuravlev, V. N.; Sorokin, L. D.

45  
43  
E

ORG: none

TITLE: Die casting of die inserts

SOURCE: Kuznechno-shtampovoychnoye proizvodstvo, no. 10, 1965, 41-42

TOPIC TAGS: molten metal forging, die, die insert, tool steel, metal casting/SKhNT tool steel

ABSTRACT: By contrast with the pressure die casting of nonferrous alloys and carbon steel, the die casting of tool steel still remains relatively uninvestigated. In this connection, the authors investigated the process of the pressure die casting of SKhNT tool steel into swaging-die inserts by means of a device designed and built for mounting in 60 and 200-ton hydraulic presses equipped with anti-spatter shields. Of the various die assemblies tested, the one shown in Fig. 1 proved to be of the most suitable design. In this die assembly die 6 is mobile; when open, it is caused by springs 8 to rise to as high a position as is permitted by the limiting screws 9. Then the lower plane of the die does not rise above the level of the upper surface of bottom 10. After the molten metal is poured into the cavity, punch 2 descends together with yoke 3. As the descent of the punch continues, the die begins its descent, thus compressing the springs 8. The punch, by occupying the volume

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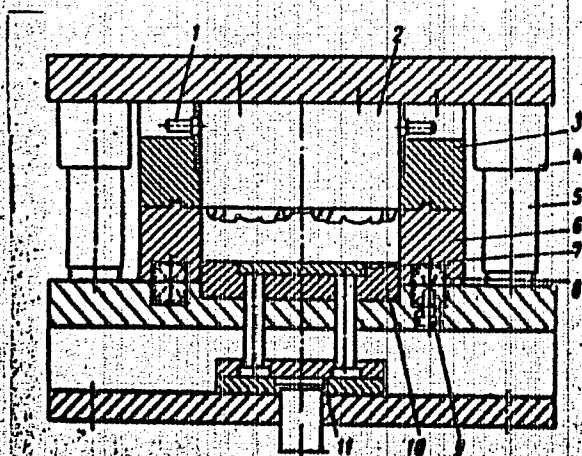


FIG. 1.

Figure 1.

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ACC NR:AP6004682

2

previously occupied by the molten metal causes the latter, to get displaced upward until the cavity is completely filled. The solidification of the metal takes place under pressure. After this, the upper part of the die assembly is raised and the product is ejected from the die. The punch, die and other parts of the die assembly are housed in a frame consisting of lower and upper bolsters, guide columns 5, bushings 5 and ejection system 11. Hollow rod 1 provides water for cooling the punch. The technique used for the die casting of inserts was as follows: 5KhNT steel was melted in an induction furnace and, at a temperature 1550-1600°C poured from a ladle into the die assembly. Through trial and error it was found that reducing the thickness of the thus cast die inserts from 55 to 40 mm and increasing the pressure on the metal to 6-8 kg/mm<sup>2</sup> virtually eliminates shrinkage porosity in the casting. The cast inserts ejected from the die are cooled and thereupon annealed at 860°C for 2 hours and at 760°C for 2.5 hours. They have a compact fine-grained structure and display a more uniform cross section than die inserts fabricated by conventional casting. Operating trials (at a forging shop, in a 1600-ton forging press) showed that the quality of die inserts produced by the die casting method is equal to that of the inserts produced by the forging method. What is more, production of the inserts by this new technique saves scarce tool steel, since they can be cast from the wastes of the press and forging shop. In addition, the tolerances are then reduced, thus reducing the weight of the blank and the volume of its subsequent machining. Orig. art. has: 4 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

Card 3/3 vmb

PHASE I BOOK EXPLOITATION SOV/3727

Razresheniye vozmozhnostey primeneniya plastmass v konstruktivnykh mashin (Widening the Possibilities for Using Plastics in Machinery Components) Moscow, Mashgiz, 1959. 183 p. 8,000 copies printed.

Reviewers: M.Y. Popyov, Engineer, and P.Z. Petukhov, Doctor of Technical Sciences; M.A. Solov'yev, Engineer; Tech. Eds.: M.A. Dukhin and V.Y. Usturova; Exec. Ed. (Ural-Siberian Division, Mashgiz): I.M. Sosova, Engineer.

PURPOSE: The book is intended for engineers and scientists engaged in the study and manufacture of plastics and plastic machine parts.

COVERAGE: The chapters of this book were written by different authors indicated in parentheses after each chapter in the table of contents. The chapter on the use of plastics in non-Soviet countries includes data on the Soviet firms in Czechoslovakia, a number of Soviet manufacturing establishments, and a number of Soviet enterprises using plastics for structural and mechanical purposes. Considerable attention is paid to the use of plastics in the construction of machines and equipment or substituting plastics for critical materials in types of equipment subjected to wear or to corrosive, abrasive and chemical influences. Brand designations, properties and uses of a number of Soviet-made plastic materials are given. It is thus a survey of modern Soviet plastic materials grouped according to their specific application in industry. The authors rely heavily upon the experience of Ural plants, especially those specializing in electrical apparatus, automotive equipment, and machine instruments. No personalities are mentioned. There are 37 references: 31 Soviet, and 5 German.

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ZHURAVLEV, V. N.

Steel, Structural

Designing light-weight shaped and welded steel constructions, Vest. mash., 32, no. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, October 195~~2~~<sup>4</sup> Uncl.

25(2)

PHASE I BOOK EXPLOITATION

SOV/2705

Zhuravlev, Vitaliy Nikanorovich

Snizheniye vesa mashinostroitel'nykh konstruktsiy (Reducing the Weight of Constructions Used in Machinery) Moscow, Mashgiz, 1959. 272 p. Errata slip inserted. 8,000 copies printed.

Reviewer: E. A. Satel', Professor, Honored Worker in Science and Technology; Ed.: Ye. V. Pal'mov, Doctor of Technical Sciences, Professor; Tech. Ed.: N.A. Dugina; Exec. Ed. (Ural-Siberian Division, Mashgiz): T. M. Somova, Engineer.

PURPOSE: This book is intended for technical personnel and scientific workers. It may also be used by students of schools of higher technical education.

COVERAGE: The book contains the fundamentals of design of light-weight constructions used in machinery. The characteristics of recently developed economical shapes are examined. Theoretical investigations and practical data on the design and manufacture of welded steel and combined constructions are summarized. Manufacturing processes for some economical shapes and several types

Card 1/13

IVANOV, Ye. M.; GUSEV, G. V.; ZHURAVLEV, V. M.

Phenology of the Colorado beetle. Zashch. rast. ot vred. i  
bol. 6-no.6:50-51 Je-'61. (MIRA 16:4)

(Potato beetle)

ZHURAVLEV, Vitaliy Nikanorovich; NIKOLYAEVA, Ol'ga Ivanovna; KUCHERYAVYY,  
A.V., inzh., retsenzent; SVETLAKOV, Ch.L., inzh., retsenzent;  
KLISANICH, N.P., inzh., retsenzent; TSUKHLOV, A.P., dots.,  
retsenzent; DUGINA, N.A., tekhn. red.

[Machinery steels] Mashinostroitel'nye stali; spravochnik dlia  
konstruktorov. Moskva, Mashgiz, 1962. 237 p. (MIRA 16:2)  
(Steel, Structural)

VOYNICH, L.K.; GORELIK, Z.M.; ZHURAVLEV, V.N.; CHIRKOV, A.O.; BOL'SHAKOV, B.N., red. izd-va; UVAROVA, A.F., tekhn. red.

[Catalog of parts for MAZ-200 motortrucks, MAZ-200B saddle-type tractors, and MAZ-205 dump trucks] Katalog detalei gruzovogo avtomobilia MAZ-200, sedel'nogo tiagacha MAZ-200B i avtomobilia-samosvala MAZ-205. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 430 p. (MIRA 14:8)

1. Minskiy avtomobil'nyy zavod. 2. Rabotniki Otdela glavnogo konstruktora Minskogo avtomobil'nogo zavoda (for all except Bol'shakov, Uvarova)

(Motortrucks--Catalogs)

(Dump trucks--Catalogs)



CHEKANNIKOV, N.I., inzh.; PASTUSHENKOV, A.F., inzh.; ZHURAVLEV, V.N., inzh.

Open pit coal mining system without transportation with the use of  
power excavators. Ugol' 36 no.2:21-24 F '61. (MIRA 14:2)

1. Trest Cherenkhovugol'.  
(Strip mining) (Excavating machinery)

ZHURAVLEV, V. N.

Boring machine. Mast. ugl. 7 no.10:19 0 '58. (MIRA 11:11)

1. Glavnyy inzhener Khrantsovskogo razreza No.2 tresta Cherenkhovugol'.  
(Drilling and boring machinery)

ZHURAVLEV, V.<sup>N</sup>, inzh.; UMNOV, N., inzh.

Two scrapers. Mast. ugl. 8 no. 5:14 My '59. (MIRA 12:8)  
(Coal mines and mining—Equipment and supplies)

DUDA, Ye.G., gornyy inzh. (g.Kemerovo); ZHURAVIN, V.N., gornyy inzh.  
(g.Kemerovo); UMNOV, N.R., gorn.inzh. (g.Kemerovo)

Some problems of exploiting open-pit coal mines in the  
Kuznetsk Basin. Ugol' 34 no.3:8-9 Mr '59. (MIRA 12:5)  
(Kuznetsk Basin--Coal mines and mining)  
(Strip mining)

ZHURAVLEV, V.N., inzh.; KOMAROV, G.I., inzh.

Eliminating water intrusions through shaft lining at the  
"Karagailinskaia" No.1/2 Mine. Shakht. stroi. 8 no.9:  
22-24 S '64. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut stroitel'stva ugol'nykh  
i gornorudnykh predpriyatiy.

ZHURAVLEV, V.P.; POPOV, V.K.

Calculation of the screening effect of two layers in the interpretation of logging resistance data. Moscow. 1 prom.  
geofiz. no.49:101-117 '63 (MIRA 17:7)

SHILENKOV, V.N., kand. tekhn. nauk; ZHURAVLEV, V.P., kand. tekhn. nauk

Effect of wetting agents on the parameters of preliminary coal  
wetting. Ugol' 40 no.2:57-58 F '65. (MIRA 18:4)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut.

ZHURAVLEV, V.P.; SHILENKOV, V.N.; RYZHIKH, L.I.; SKACHKOV, Ye.Z.

Changes in the permeability of a seam along its cross section. Nauch.  
trudy KNIUI no.16:3-5 '64.

Effect of wetting additives on the decrease in the strength of coal.  
Ibid. 11-14 (MIRA

Increasing the efficiency of weakening the coal massif with the help  
of softening solutions. Ibid. 245-249 (MIRA 13:7)



SHILENKOV, V.N.; ZHURAVLEV, V.P.; RYZHIKH, L.I.

Studying filtering processes with the use of coal samples. Nauch.  
trudy KNIUI no.16:6-11 '64. (MIRA 18:7)

ZHURAVLEV, V.P.; POYELUYEV, A.P.

Increasing the efficiency of sprinkling during the operation of the  
K-52m cutter-loader. Nauch. trudy KNIUI no.16:17-19 '64.

Effect of sprinkling on the disperse composition of dust formed during  
the operation of mining cutter-loaders. Ibid.:19-22 (MIRA 18:7)

ZHURAVLEV, V.P.; POYELUYEV, A.P.; SHILENKOV, V.N.; RYZHIKH, L.I.

New type of sprayers. Nauch. trudy KNIUI no.16:22-28 '64. (MIRA 18:7)

POPOV, V.K.; SILKINA, D.N.; ZHURAVLEV, V.P.

Determining the thickness of thin beds from the data of  
electric logging. Prikl. geofiz. no. 40:198-209 '61

ZHURAVLEVA, V.P.; TIMUK, O.Ye.

Sherry yeast in Turkmenia. Izv. AN Turk.SSR.Ser.biol.nauk no.1:36-  
40 '65. (MIRA 18:5)

1. Institut botaniki AN Turkmenkoy SSR.

KSENOFONTOVA, A.I., prof.; BURCHAKOV, A.S., kand.techn.nauk; ZHURAVLEV, V.P.,  
inzh.

Water injection into the seam and calculation of the hydraulic  
parameters of coal seams. Ugol' 36 no.2:37-41 F '61. (MIRA 14:2)

1. Moskovskiy gornyy institut im.I.V.Stalina.  
(Mine dusts) (Coal—Permeability)

ZHURAVLEV, V.P., inzh.

Combined use of deep boreholes for degassing and preliminary wetting of coal seams. Izv. vys. ucheb. zav.; gor. zhur. (MIRA 14:6)  
no. 4:77-80 '61.

1. Moskovskiy gornyy institut imeni I.V.Stalina. Rekomendovana kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti Moskovskogo gornogo instituta.  
(Coal mines and mining)

ZHURAVLEV, V.P., inzh.

Investigating the wetting of coal in the solid through deep holes  
in order to reduce the dust formation in coal mine stopes. Izv;  
vys. ucheb. zav.; gor. zhur. no.10:79-82 '60. (MIRA 13:11)

1. Moskovskiy gornyy institut imeni I.V.Stalina. Rekomendovana  
kafedroy ventilyatsii i tekhniki bezopasnosti Moskovskogo gornogo  
instituta.

(Coal mines and mining—Safety measures)  
(Mine dusts)



KEYROVICH, Ye.N.; ZHURAVLEV, V.P., kand. tekhn. nauk; RYZHIKH, L.I., gornyy inzh.

Dust control in the Kostenko "A" Mine. Ugol' 38 no.8:50 Ag '63.  
(MIRA 17:11)

1. Glavnyy inzh. shakhty "A" im. Kostenko (for Keyrovich).
2. Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut (for Zhuravlev, Ryzhikh).

ZHURAVLEV, V.P., kand. tekhn. nauk; SHILENKOV, V.N., kand. tekhn. nauk;  
KRIKUNOV, G.N., inzh.

Use of the petrographic method of studies in the search of  
ways to increase the effectiveness of preliminary moistening  
of the coal beds. Bor'ba s sil. 6:7-10 '64 (MERA 18:2)

1. Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut.

POYELUYEV, A.P., inzh; ZHURAVLEV, V.P., kand. tekhn. nauk; RIZHIKH, L.I.,  
inzh.

Increasing the effectiveness of spraying in the work of extracting  
cutter-loaders in the Karaganda Basin. Bor'ba s pil. 6:37-42 '64  
(MIRA 18:2)

1. Karagandinskiy nauchno-issledovatel'skiy ugol'nyy institut.

SHILENKOV, V.N.; ZHURAVLEV, V.P.; POYELUYEV, A.P.; RYZHIKH, L.I.; SKACHKOV,  
Ye.Z.

Raising the efficiency of coal mining with cutter-loaders by  
weakening the massif by wetting it . Nauch. trudy KNIUI no.13:  
29-38 '64 (MIRA 18:1)

ZHURAVLEV, V.P.; POPOV, V.K.; TERENOSHCHAYA, L.A.

Determining the resistance of the layers of mean thickness.  
Razved. geofiz. no.4:120-128 1965. (MIRA 18:9)

ZHURAVLEV, V.P.; SHILENKOV, V.N.; RYZHIKH, L.I.; POYELUNEV, A.P.; BOGACHEV, V.P.

Wetting of coal seams with solutions for the decrease of dust formation and coal loosening, as well as for the control of gas liberation and prevention of endogene fires. Ugol' 40 no.8:65-68 Ag '65.

(MIRA 18:8)

ZHURAVLEV, V.S.

Types of salt domes in the Caspian Lowland. Trudy GIN no. 92:162-201  
'63. (MIRA 17:10)

ZHURAVLEV, V.S.

Comparative characteristics of periclininal troughs in the Ural  
fold system and features of their recent relief. Bial. MOIP.  
Otd.geol. 39 no.5:157-158 S-0 '64. (MIRA 18:2)



VOICHEGURSKIY, L.F.; ZHURAVLEV, V.S.

Structural relations between salt domes in the Caspian lowland as revealed by a study of the family of the Sanketay-Kruglyy salt dome. Geotektonika no.2:94-105 Mr-Ap '65.

(MIRA 18:5)

1. Vsesoyuznyy Aerogeologicheskii trest Gosudarstvennogo geologicheskogo komiteta SSSR i Geologicheskii institut AN SSSR.

ZHURAVLEV, V.S.; PERFIL'YEV, A.S.; KHERASKOV, N.P. [deceased]

Spatial and temporal relationship between "uralides" and  
"pre-uralides" in the eastern margin of the Russian Plat-  
form. Biul.MOIP.Otd.geol. 40 no.5:106-130 S-O '65.

(MIRA 18:11)

LEVROV, V.P.; GONCHARENKO, B.D.; ZHURAVLEV, V.S.; SVITTOCH, A.A.

Using seismic prospecting for the study of recent tectonics  
in the Ural and Volga interfluvium. Izv. AN Kazakh. SSR Ser.  
geol. 22 no. 6:53-58 N-D '65 (MIRA 19:1)

1. Institut geologii i razrabotki goryuchikh iskopayemykh,  
Moskva, i Vsesoyuznaya geologoposkovaya kontora, Moskva.

L 32195-66 FBD/FSS-2/EWT(1)/EEC(k)-2 TT/GW/WS-2/WR

ACC NR: AP6006788

SOURCE CODE: UR/0033/66/043/001/0220/0226

AUTHOR: Zhuravlev, V. S.; Petrovskiy, A. A.; Pogrebnyy, B. P.

ORG: Radio Physics Institute, Gorkiy State University (Radiofizicheskiy institut Gor'kovskogo gos. universiteta)

TITLE: General-purpose radio telescope with antenna diameter of 15m.

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 1, 1966, 220-226

TOPIC TAGS: radio telescope, radio telescope antenna, electric motor, interferometer, elastic deformation, TV equipment, satellite, satellite tracking/RT-15 radio telescope, Echo-II satellite, MI-32T electric motor, MI-52T electric motor, PTU-3 TV equipment

ABSTRACT: The RT-15 radio telescope for observation of celestial bodies and artificial Earth satellites is described. Two such telescopes have been in operation at Zimenki since 1962 and were used in a series of experiments on a radio communication link established between Zimenki and Jodrell Bank via the Echo-II satellite. A photograph of the RT-15 is shown in Fig. 1.

The telescope together with its steering mechanism weighs 120 metric tons. Its height measured from the base of a steel-reinforced foundation is 30 meters. The solid foundation does not allow the tele-

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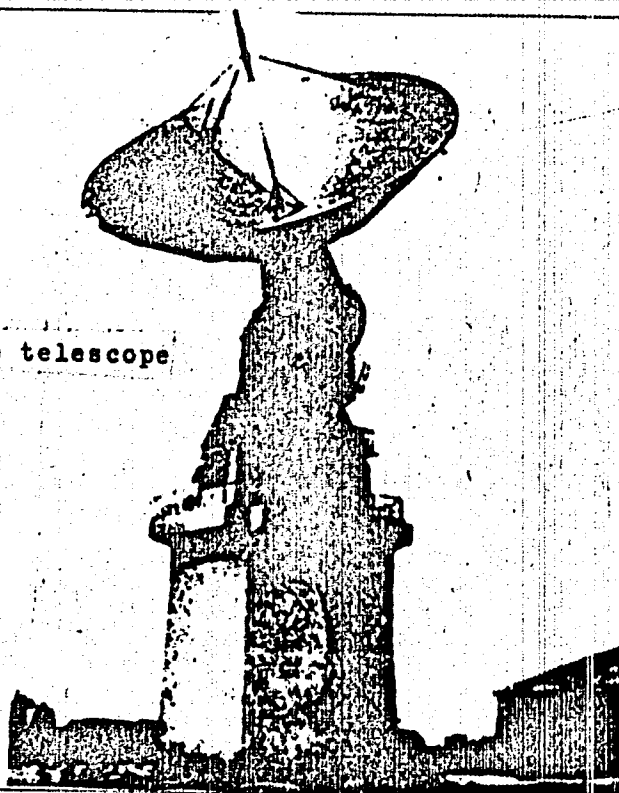
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Fig. 1.

The RT-15 radio telescope

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scope to sway more than 5" in winds up to 25 m/sec. The backlash effect and elastic deformations of the rotating mechanisms do not exceed 1.5' and are compensated by feedback systems. The dish antenna may be rotated from -3° to 183° with respect to two mutually perpendicular axes. The error in establishing the perpendicularity of the axes did not exceed  $\pm 30''$ , and the error in aligning one of the axes in a particular direction was kept within  $\pm 20''$ .

The antenna system consists of two reflecting mirrors: a 15-m diameter parabolic reflector with the active surface machined to an accuracy of  $\pm 0.75$  mm and a coaxially mounted hyperbolic counter-reflector (not shown in Fig. 1) placed at a distance of 4.69 m from the apex of the first mirror. The power source for steering consists of two motors for each axis: the MI-32T (0.37 kw), which by means of a 240,000:1 reducer tracks slowly moving celestial objects, and the MI-52T (7 kw) with a 10,800:1 reducer which allows the telescope to follow fast moving objects such as artificial Earth satellites.

The position of the telescopes may be controlled in three modes from a control unit located nearby. The automatic tracking mode directs the dish according to a previously prepared program punched on standard

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ACC NR: AP6006788

35-mm tape. Discrete error signals arise when the data representing the desired telescope direction disagree with the data on the actual direction from the selsyn angle indicators, which give a discrete signal for every 12"-change in direction. The error signals are applied to the feedback loop of the tracking system. When fast-moving objects are being tracked, a velocity error signal commands most of the corrective action.

To reduce the amount of program input data, the desired velocity is computed by linear interpolation of rate of change of position data entered on punched tape. Strong velocity feedback introduces an undesirable constant-error component due to nonlinearities of the tachometers and temperature compensating elements. This error is compensated with the aid of a unit which regulates tachometer characteristics. The system works in a synchronous mode established by the master clock—a quartz crystal whose output signal frequency is divided by  $2^{21}$ .

The second control mode is for visual tracking and is done manually by varying the position or velocity of telescope rotation or both by semi-automatic means. The tracking accuracy depends on the operator's ability to keep the image of the tracked object on the intersection of the cross-hairs on the TV receiving screen. The image on the screen

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originates from a TV transmitter coupled to an optical telescope installed on the reflector. The TV link uses the standard PTU-3 industrial TV system. The objects for this mode of tracking must be brighter than 6 m.

The third mode is tracking of celestial bodies with the use of tabulated data from previous observations. Angle or velocity tracking is done manually by entering the angle and velocity data from tables into the system every 2, 4, or 16 minutes, depending on the desired accuracy. After each tracking time interval, the desired and actual telescope position angles are compared. The nonagreement between the two, i. e., the error signal, is stored on a capacitor and included as supplementary information for the next tracking interval.

The characteristics of each tracking mode are given in the accompanying table.

The two radio telescopes may also be utilized as interferometers or as spares for each other.

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Table 1. Tracking mode data

6

Operating mode	Velocity	Acceleration	Velocity range	Tracking error
Rapid movement				
Automatic tracking	1.5°/sec	0.1°/sec <sup>2</sup>	—	24—36"
Visual tracking	1.8°/sec	0.15°/sec <sup>2</sup>	150	—
Realignment	2.0°/sec	0.15°/sec <sup>2</sup>	150	—
Slow movement				
Automatic tracking	80"/sec	5.10 <sup>-2</sup> "/sec	—	24—36"
Visual tracking	80"/sec	3"/sec	150	30"
Tracking with data tables	80"/sec	—	300	60"*

\* At top speed using 2-min tracking intervals.

A. Ye. Sokolov, A.Z. Shaniro, G. L. Bruk, Yu. N. Semenov, N. M. Krutkova, and I. S. Motin participated in the designing and preparation of the radio telescope. Orig. art. has: 7 figures and 1 table. [FSB: v.2, no. 5]

SUB CODE: 17,09, 22 / SUBM DATE: 26Feb65

LS

Card 6/6

ZHURAVLEV, V.S.; PETROVSKIY, A.A.; POGREENYY, B.P.

Universal radio telescope with a 15 m. antenna diameter.  
Astron. zhur. 43 no. 1:220-226 Ja-F '66 (MIRA 19:2)

1. Radiofizicheskiy institut Gor'kovskogo gosudarstvennogo  
universiteta. Submitted February 26, 1965.

AVROV, P.Ya.; BULEKBAYEV, Z.Ye.; GARETSKIY, R.G.; DAL'YAN, I.B.;  
ZHURAVLEV, V.S.; MULDAKULOV, G.G.; FOMENKO, K.Ye.; SHLEZINGER, A.Ye.

Basic characteristics of the structure of the eastern and southeastern  
margins of the Caspian Lowland based on subsalt sediments. Geotektonika  
no.1:118-125 Ja-F '65. (MIRA 18:5)

1. Institut geologicheskikh nauk imeni Satpayeva AN Kazakhskoy  
SSR i Geologicheskiiy institut AN SSSR.

KUSHNAREVA, T.I.; ZHURAVLEV, V.S.; ZARKH, V.P.; SAAR, A.A.

Stratigraphy and tectonics of the basement of the southwestern part  
of the Timan Range region. Dokl. AN SSSR 162 no.3:632-635 My '65.  
(MIRA 18:5)

1. Submitted January 28, 1965.

MATVIYEVSKAYA, N.D.; ZHURAVLEV, V.S.

Pechora-Kozhva swell. Dokl. AN SSSR 161 no.4:903-906 Ap '65.  
(MIRA 18:5)

1. Ukhtinskaya geofizicheskaya kontora i Geologicheskii institut AN SSSR. Submitted December 3, 1964.

ZHURAVLEV, V. V.

AUTHOR: Zhuravlev, V. and Grin', N.

107-5-17/54

TITLE: Application of Electronics in Geology  
(Primeneniye elektroniki v geologii)

PERIODICAL: Radio, 1956, Nr5, p. 15 (USSR)

ABSTRACT: An invitation to radiospecialists and radiohams to develop a number of apparatus that may be useful in geological work. Fairly accurate specifications for the desired apparatus are given:

A seismic station with a 1-f voltage amplifier block of 12 to 26 units. Frequency band 30-350 c with narrow band-pass filters and high discrimination. Weight under 6 or 5 kg.

A radio link between seismic pickups and a seismic station; 12 channels.

An orebody locator for searching the interadit massives by means of the shadow method. Range 50 m or more. Frequencies 1 to 10 mc.

An instrument for accurate determination of length of the cable in bore-hole logging; error  $\frac{1}{2}$  m in a length up to 1.000 m. Also an instrument is needed for accurate determination of a cable wire break.

An instrument for measuring the level of subterranean waters with an error of 2-3 mm in the range of a few meters. Recording of such measurements for 10 days or more.

BAZHENOV, A.S.; ZHURAVLEV, V.V.

New electrical prospecting apparatus for work based on the intensity method. Razved.i okh.nedr 22 no.7:49-54 J1 '56.  
(MLPA 9:11)

1. Ministerstvo geologii i okhrany nedr SSSR.  
(Prospecting--Geophysical methods) (Electric instruments)

3(

SCV/132-59-8-7/18

AUTHORS: Shirokov, A.S., and Zhuravlev, V.V.

TITLE: Basic Problems of Perfecting and Developing Geophysical Equipment

PERIODICAL: Razvedka i okhrana nedr, 1959, Nr 8, pp 27-32  
(USSR)

ABSTRACT: The author states the urgent necessity to modernize present, and to create new, geophysical equipment. Although this equipment was greatly developed since the last war, it is already obsolete and new devices and aggregates must be created. At present, different scientific research institutes and organizations are developing new equipment much too slowly, and plants are also lagging in its production. Measures have now been taken to increase the production of this equipment 2.4 times by 1965 over 1959. The author reviews the new equipment to be created in the next years.  
I-Seismographic exploration.

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The obsolete 26-channel seismic stations of SS-26-51D



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type will be replaced by more economical and highly-productive 60-channel stations of SS-30/60 type and the portable SS-24P stations. These stations now being produced at the "Neftepribor" Plant. The old stations will all be replaced in the next 2 years. A special attachment of the PPMZ-2 is also being produced for the magnetic recording of oscillations for 25 channels. The "Neftepribor" Plant is also producing an autonomic seismic station with an intermediate magnetic recording device of SSM-57 type. Equipment for a regulated directed receiving (RNP) of seismic oscillations developed by the Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. Gubkina (the Moscow Institute of the Petrochemical and Gas Industry imeni Gubkin) is now being delivered to industry. New universal seismic stations with photographic recording are now being introduced into industry. Apart from the production of SPM-16 and SPED-56 seismographic receivers

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now being produced, new low-frequency receivers of SPEN-1 type with 10 c frequency, and of NS-3 type with 3 c frequency will be produced in 1960. The VNIIGeofizika has developed a seismic station of MSS-58 type with a floating piezo-aggregate, which will permit seismographic exploratory research at sea. The new exploding device SVM-1, of condenser type, will be produced in 1960.

II. Gravimetric exploration.

The SN-3 and GAK-3M gravimeters will be replaced by gravimeters of GAK-4M type with an average precision of 0.2 milligals. More precise gravimeters will be produced later. A new gravimeter-altimeter of GVP-1 type, which can determine the gravity force along with the altitude of observation points, will also be produced in 1960. The Zavod "Geologorazvedka" ("Geologorazvedka" Plant) renewed the production of gravitational variometers of the VG-1 type and of gravitational gradientometers of

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GRBM-2 type.

III. Magnetic exploration.

The Institut zemnogo magnetizma AN SSSR (the Institute of Terrestrial Magnetism of the AS USSR), and the OKB, constructed a new quartz magnetometer M-14 with the magnetic element suspended on quartz threads. It will replace the obsolete M-2 magnetometer. VITR developed models of a magnetometer working on the principle of nuclear resonance. At a precision of 1 or 2 gamma, the device needs no orientation, and its indications do not depend on the temperature. These magnetometers will be produced in 1960. The OKB of the Ministry of Geology and Conservation of Mineral Resources of the USSR is preparing designs of a factory model of a portable magnetometer with a magnetic modulation counter and an electronic scheme on semi-conductors (M-17) based on the calculations of the Institut mashinovedeniya i avtomatiki AN Ukrainskoy SSR (Institute of Mechanical

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Engineering and Automation of the USSR (Ukrainskaya SSR). To improve the accuracy of measurements of the ASGM-25 aerogeophysical station, its AEM-49 magnetometer was modernized, and a new ASG-45 magnetometer will soon be produced by the "Geologo-razvedka" Plant. Construction design of a new T-aeromagnetometer AM-13 of high precision along with a magnetomodulating indicator is nearing completion. The Barnaul'skiy zavod geofizicheskoy apparatury (Barnaul Plant of Geophysical Equipment) is preparing the production of a field device called the "pronometer Kalashnikova" (Kalashnikov Device for Measuring Penetrability) to determine the degree of magnetic penetrability of samples of rocks, based on an electrical scheme on semi-conducting triodes.

IV. Electrical Exploration.

The electro-exploring stations ERS-23, ERS-16.5 and the station of telluric currents EPL-57, and the potentiometer EP-1, presently produced at plants

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